

## ABSTRRACT

The present invention aims at providing a high affinity anti-HIV antibody. According to the present invention, there are provided an antibody or a fragment thereof that  
5 binds to the gp12 glycoprotein of HIV and has a dissociation constant (KD) value of  $1.0 \times 10^{-9}$  (M) or less; a pharmaceutical composition comprising the antibody or fragment thereof; and a method of producing an anti-HIV antibody or a fragment thereof, comprising immunizing a GANP transgenic non-human mammal or a progeny thereof with a polypeptide consisting of the amino acid sequence as shown in SEQ ID NO: 6 as an antigen  
10 and collecting the antibody from the resultant mammal or progeny.